APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,474	02/05/2001	Akiyoshi Yamashita	MAT-8048US	5500

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EXAMINER
CHOI, WOO H

ART UNIT	PAPER NUMBER
2186	

DATE MAILED: 02/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 November 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claim 1 is objected to because of the following informalities:

The claim recites the limitation "when said removable media is both loaded in and unloaded from the said removable device." When interpreted in light of the specification, this limitation seems to mean that the drive letters are allocated regardless of whether the media is loaded in or unloaded from said removable device. However, as currently stated, literal interpretation of the limitation seems to require that the timing of the allocation of drive letters coincide with loading and unloading of the removable media. This is not described in the specification. It is suggested that the limitation be changed to more clearly reflect the invention described in the specification. Otherwise, the claim will be rejected under 35 USC 112, first paragraph. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1, 5, and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Williams

et al. (US Patent No. 5,802,363, hereinafter "Williams").

Williams discloses a method of creating partitions in a removable device (figures 1 and

10) capable of accepting a removable media (figure 11, col. 4, lines 36 - 39), said method being

characterized by:

communicating between an operating system and a device driver in a computer system

capable of connecting with a removable device (figure 1); and

creating partitions (the device is portioned into an array of 4x6 disks in figure 1, see also

figure 10 for physical portioning of the device, figure 7 shows logical partitioning of the device

into 4 logical volumes) in the removable device independent of the removable media (these

assignments are independent of media, for example, the 'hot spare' disks shown in figures 7A

and 8A can substitute for any disk that fails, see col. 55 – 61); and

allocating drive letters in number equal to a number of plural drives (Figure 8, each

logical volume has a name or a number associated with it) to a single unit of said removable

device, when said device driver allocates drive letters to said operating system when said

removable media is both loaded in and unloaded from said removable device.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 2, 4 and 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Williams.

6.   With respect to claims 2 and 7, Williams discloses all of the limitations of the parent

claim as discussed above. However, Williams does not specifically disclose that the number of

drives is equal to the maximum supported by the operating system. On the other hand, assigning

drive letters to the maximum number of partitions supported by the operating system is within

the normal capabilities of Williams's invention during ordinary use of the system, hence is not a

novel feature. It would be obvious to one of ordinary skill in the art at the time the invention was

made to assign the drive letters to the maximum number of partitions supported by the operating

system to be able to use the full logical resources available for the device.

7.   With respect to claim 4, logical disk names are normally assigned by the operator.

8.   Claims 2 – 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Williams in view of Mircrosoft (Microsoft Windows 95 Resource Kit, 1995).

With respect to claims 2 and 7, Williams discloses all of the limitations of the parent

claim as discussed above. However, Williams does not specifically disclose that the number of

drives is equal to the maximum supported by the operating system. On the other hand, Microsoft

discloses an operating system where the maximum number of supportable partitions on a

removable device can be defined (Microsoft, page 653,MaxRemovableDrivePartition).

It would have been obvious to one of ordinary skill in the art, having the teachings of

Williams and Microsoft before him at the time the invention was made, to use the Windows

operating system teachings of Microsoft in the computer system of Williams, in order to be able

to use a vast array of Window applications.

9.   With respect to claim 3, said drive letters allocated to the single unit of said removable

device remain valid until being reallocated again; and

        a number of drive letters derived by subtracting a number of partitions on a medium

within said removable device from the number of said drive letters is recognized as being

absence of any medium (page 653, second paragraph, Windows 95 recalculates the disk

geometry every time a media change is detected).

10.   With respect to claim 4, said drive letters comprise arbitrary characters allocated by an

operator (page 652, see procedure 'To reserve drive letters for removable media').

11.   Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Fisher et al. (US

Patent No. 6,226,711, hereinafter "Fisher").

Fisher discloses a method of creating partitions in a removable device (figures 1, 120 tape drive) capable of accepting a removable media, said method being characterized by:

communicating between an operating system and a device driver in a computer system capable of connecting with a removable device (figure 1); and

creating partitions (figure 3 shows 3 partitions) in the removable device independent of the removable media; and

allocating drive letters in number equal to a number of plural drives (Figure 5, each tape drive has drive letters assigned) to a single unit of said removable device, when said device driver allocates drive letters to said operating system when said removable media is both loaded in and unloaded from said removable device.

12.   Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Moss (US Patent No. 5,408,630).

Moss discloses a method of creating partitions in a removable device (figures 1, 300, virtual volume set, the drives that comprise the set can be removed from the computer) capable of accepting a removable media (media is part of the drive), said method being characterized by:

communicating between an operating system and a device driver in a computer system capable of connecting with a removable device (figure 1); and

creating partitions (Figure 1, virtual volumes) in the removable device independent of the removable media (col. 3, lines 24, 35, partitions are created according to the size of the CD-ROM regardless of the underlying media of the virtual volume set); and

allocating drive letters in number equal to a number of plural drives (col. 4, lines 25 – 34)

to a single unit of said removable device, when said device driver allocates drive letters to said

operating system when said removable media is both loaded in and unloaded from said

removable device (LMT which contains the drive letters resides in the memory of the computer

and not on the disk media, so the removal of the disk media would not eliminate the LMT).

13.   Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Maffezzoni (US

Patent No. 6,385,707).

Maffezzoni discloses a method of creating partitions in a removable device (figure 1A,

104a and 104b, see also figure 3A) capable of accepting a removable media (202), said method

being characterized by:

communicating between an operating system and a device driver in a computer system

capable of connecting with a removable device; and

creating partitions (figure 3, 206) in the removable device independent of the removable

media (partitions created depend entirely on the partitions on the hard drives that is being backed

up); and

allocating drive letters in number equal to a number of plural drives (Each of 104a and

104b gets its own drive letter in Windows which is the preferred OS, see col. 7, lines 36 – 45.

Examiner notes that, as currently claimed, there is no relationship between the plural drives and

partitions.) to a single unit of said removable device, when said device driver allocates drive

letters to said operating system when said removable media is both loaded in and unloaded from

said removable device.

Conclusion

14.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Williams (US Patent No. 5,692,190) and Bar (Us Patent No. 6,031,698) disclose other methods of partitioning removable storage devices. Cabrera *et al.* (US Patent No. 6,654,881) disclose a method of managing assignment drive letters to partitions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Woo H. Choi whose telephone number is (703) 305-3845. The examiner can normally be reached on M-F, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on (703) 305-3821. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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February 5, 2004

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